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# *The* **MANAGEMENT REVIEW**

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# *The* **MANAGEMENT REVIEW**

*October, 1929*

## **Industrial Economics—The Concern of Management**

*By* LEONARD KUVIN, *Chief Statistician*  
*Index Number Institute*

THE extensive mechanization of industry which has taken place in the last two decades has not only influenced and colored the whole of our economic and social life but has also laid the grounds for further modification and enriching of our civilization. Only an insignificant part in the development of existing complex human relations may be ascribed to forces other than those resulting from such mechanization. The balance has proceeded and still is proceeding in an orderly fashion from economic forces to their effects.

The direction of economic forces has, however, rested with no one class of individuals. The broad fields of finance, distribution, and production of goods have brought forth leaders to execute the demands of these fields. And yet, the qualifying essentials of such leaders belong, in the main, to the field of industrial management.

This condition points clearly to the existence of a distinct field of endeavor whose limits as yet, have not been clearly defined. This field may be called that of "industrial economics."

The printed material of industrial management is replete with a wealth of facts, theories, laws and doctrines of management, centered primarily around the subject of production. The subject matter of economics on the other hand, while embracing the general questions of production, distribution and finance, has proceeded in the main as an enterprise apart from that of management.

It falls, then, to the lot of a newly defined field to treat all of the combined questions in a detailed, specialized manner. In their essentials, the problems of wages, productivity of labor, output of industry, distribution of

returns, stabilization of prices, continuity and regularization of employment, planning of expansion and the many other related problems should be considered a part of the work of management.

### **Definition and Scope**

Industrial economics is that field of activity which concerns itself with the understanding and direction of the industrial and economic forces of our material life.

In the sense that forces must be understood, this field covers the quantitative and qualitative economics of industrial enterprise. In the sense that these forces must be directed the field of industrial economics covers the field of management.

The scope of industrial economics intrigues one's vision. In our work-a-day life we have become accustomed through sheer necessity to divide into fine parcels the pastures of our thought. The demands of an industrial society are compelling. The minutiae of information gained from microscopic investigations have yielded innumerable clues to industrial ills. And yet, just as the knowledge of the atom permits free rein to our powers of generalization in regard to the universe so does our detailed knowledge of economics and management permit a more comprehensive investigation of the material forces of society.

There must, however, be a recombining of elements into a broader category effectively to mark out a workable field. The management or industrial engineer, the economist, the statistician, the accountant, the financier, and the business man must pool their several interests and abilities in this field. Their individual activities must be consciously coordinated into a harmony of interests. They must permit themselves to regard their separate activities as parts of a working whole rather than as distinct ends in themselves.

Let no one mistake the implications of this proposal. It is not contended that such individuals do not cooperate in their individual activities if several are engaged in furthering the ends of the same one enterprise. Rather it is urged that they think and act professionally for one and the same bigger end, namely, the more effective and complete understanding and control of the material forces of our life.

### **A Different Attitude**

The proposal alone is new; the idea is old. Regrouping and reclassification of data and knowledge has taken place in the fields of physics and chemistry so that today we no longer regard their subject matters distinct and mutually exclusive. So also with psychology, physiology and biology. Even physics and biology have joined hands to effect a better understanding of their collective subject matter. This is the era of mergers.



They are not only possible and feasible but essential. Just as it is impossible correctly to regard organisms apart from the physical forces acting upon them and similarly impossible to understand human beings apart from their environments so is it impossible to effect a complete understanding of modern economic forces without the aid of industrial management.

It requires a different attitude than that which existed in the past. It requires the conscious act often initiated by the so-called engineering mind to direct into one channel the divergent streams of intellectual energy. This attitude exists in the minds of a large number of individuals but needs only to be crystallized into action. The first step toward such an achievement is proposal; the next is consideration.

### **Management's Relation to Economics**

Before considering the advantages of outlining a distinct field of activity it might be well to pause at a byway. No modern text book of economics will fail to make some reference to the subject of scientific management. The notion of the subdivision of labor was patent long before the birth of scientific management and was considered within the domain of economic thought. Scientific management is most often regarded only in the light of its influence on production. There still seems to be on this ground some justification for viewing management as a part of economics.

From another point of view management is a social activity. It consists of the direction of human energies along prescribed paths leading toward a more complete mastery of the forces of nature. As such it cannot be merely a part of the domain of economics.

Economics is a science occupied with the study of factual data pertaining to the material welfare of society. Economics may contemplate management but it cannot embrace it.

What we are attempting to express is that the one is of the essence of action while the other is of the essence of contemplation. The two regarded as enterprises are not part of one another. Nor are they mutually exclusive. They are two aspects or parts of a joint enterprise whose function it is both to understand and direct social material forces.

Another point must be taken up in connection with the term industrial economics. Interrogatively, should the field apply itself to industry alone or should it also include the consideration of the problems of agriculture?

It is held by some that agriculture is a part of our industrial plan. Manufacture of commodities cannot proceed without the production of food and raw materials. In one important respect agriculture is the first step in industrial production and consequently in commerce.

Strictly speaking, if industrial economics includes both management and economics it would be necessary that it include agriculture. On the other

hand, with agriculture in only the preliminary stages of mechanization and regulation, it might be more expedient to limit the definition to industry exclusive of agriculture.

Perhaps a broader generic term—something like practical economics—would lend itself to describing the entire field. Applied to industrial economics it is open to objection, however, in that it exists apart as a field in contra-distinction to the domain of theoretical economics. Industrial economics is both theoretical and practical.

### **The Industrial Economist**

When viewed as parts of one enterprise the combination of economics and management takes on a new form. Individuals who in the past expended their energies in but one or the other field were of necessity different types of individuals.

Economists are often consulted by men of affairs in the solution of problems. It is left to the latter to execute the recommendations of the former in whatever manner is considered most expedient. Men of affairs are most often men who can manage.

The individual who combines the knowledge of the economist with the ability of the man of affairs, or the manager, is an individual of power. Such individuals are in the minority. They are at present our few leaders of industry, trade and finance.

Modern society is in dire need of countless numbers of such individuals who can translate their understanding of affairs into effective and intelligent action. Such men will be our industrial economists.

The industrial economist would be employed in industry to assist in directing individual enterprises. His duties would synthesize those phases of the work of the management engineer, the accountant and statistician which deal with problems relating to market research, price and sales forecasts, general and individual business prospects, individual business expansion, regularization of employment, unemployment insurance, profit-sharing, wage incentives and payments, productivities of labor, management and capital, labor conditions and agreements, and the many other general and specific matters which arise in the conduct of an enterprise.

He would centralize into one department all of the many problems confronting the individuals whose duties are in specifically other fields. He would coordinate their activities. In numerous cases he would relieve the chief executive; in others he would professionalize the activities of men of affairs.

As a man of thought and action he would generate the conditions from which spring new knowledge. The promise of the industrial economist is the proper guidance of social forces. By and through his fact finding energies we could begin to see light in economics.

## THE MANAGEMENT INDEX

### Abstracts and News Items

#### GENERAL MANAGEMENT

##### **Your Market Is in Your Own Eyes**

Concentrated thought will improve or find a new use for any product, says the president of the Kalamazoo Vegetable Parchment Company. A change in one commodity means changes in thousands of others. External watchfulness of merchandise is a direct avenue to new markets. Quality will create the demand. By J. Kindleberger. *Nation's Business*, September, 1929, p. 70:2.

##### **Machines Make Jobs**

The director of the National Bureau of Economic Research says that there is a marked trend toward elimination of unemployment, even though the new jobs created by machines have lagged behind those eliminated by labor saving devices. Probably there will be still further shifts in the population caused by relocation of industry. By Wesley C. Mitchell. *Nation's Business*, September, 1929, p. 43:5.

##### **The Merger Maze—Gold Dust Buys United Cigar**

On August 20 announcement was made of the purchase by a syndicate headed by George K. Morrow, chairman of the Gold Dust Corporation, a grocery products company, of control of the United Cigar Stores Company of America and the Tobacco Products Corporation. The intricacies and possibilities of the merger are too many to enumerate, for United Cigars controls

Neve Drug Stores, Inc., and Happiness Candy Stores, Inc. It is also heavily interested, through stock ownership, in such companies as Life Savers, Inc., Hygrade Food, Beech-Nut Packing Company, etc.

It is supposed that Mr. Morrow and his associates have no definite plan as yet, but that they are assembling a group of related interests with the expectation of completing their tie-ups as possibilities disclose themselves. But it is quite certain that convenient packaged goods will be handled in the present cigar and drug stores to a degree hitherto unknown, and that more package foods will be handled over soda fountains. Obviously a distribution set-up is developing in which chain cigar stores will sell groceries just as chain grocery stores sell cigarettes. There are in this some startling possibilities for price-cutting wars. By Alan H. Temple. *Commerce and Finance*, August 28, 1929, p. 1843:1.

##### **Executive Balance**

The Works Manager of the Frigidaire Corporation speaks of executive balance between conservative and radical elements as a critical factor not only in companies but in departments of a business. Sales and engineering should be radical,—favor new ideas, while finance and manufacturing should be conservative,—act as brakes. With this type of organization throughout business mortalities could be lessened materially. By Thomas B. Fordham. *System*, September, 1929, p. 21:4.

### **A Method of Measuring and Rating Management**

An analysis of the various phases of management resulting in the setting of standards for comparison with performance. By George G. Berger. *Taylor Society Bulletin*, August, 1929, p. 173:7.

### **Functions of Budgetary Control in Modern Electric Utility Management**

There is one essential consideration in the administration of the budget in any business. Each individual and each function of the business should be responsible for budgeting its own results. Budgeting is not a function of one department or bureau, but it is the concern of all who contribute to the common result. A triumph for budgeting is a victory won by sound thinking and co-ordinated effort. But in the last analysis it is the attitude of the executive management which will very largely determine the size of the victory, because management alone is in a position to weigh the efforts of all departments and to pass judgment upon the results attained. If the management gives close personal attention to the budget and is entirely in sympathy with it, there will no doubt result a

co-ordination of effort which will go a long way toward the predetermination of future results. *N. E. L. A. Bulletin*, August, 1929, p. 489:3.

### **The Duties of a Chief Executive in a Business of Moderate Size**

The author visualizes the functions of a chief executive of a modern corporation as:

1. The creation of an effective operating staff, which involves the definite division and allocation of junior executive responsibility and the maintenance of an esprit de corps;
2. The correlation of income and disbursement ordinarily through the medium of the so-called budget; and
3. The determination of major policies and the study of trend of development of the business both in its relation to competition and to general conditions.

The paper discusses these duties of the head of a corporation of moderate size and attempts to evaluate their relative importance. By Wm. L. Batt. *Mechanical Engineering*, September, 1929, p. 682:3.

## **FINANCIAL MANAGEMENT**

### **A Simple Method of Isolating Cyclical Movements Veiled by Economic Data**

Examination of many "business curves", and of indexes from which seasonal variation has been eliminated, reveals a marked three-year cycle; changes in price from year to year are in cycles of approximately three years; the cycles in most calendar-year data are one year down and two years up in a cycle of three years. This form of cycle is typical of statistical data representing a composite of industry and also of stock market opinion. Many and varied industries and businesses have been plotted in this way by the author and

nearly all show the same cyclic movements, oscillating about the normal.

Among the industries investigated in substantiation of the statistical method suggested are the production figures of vacuum cleaners, washing machines, motor trucks and passenger cars, shipments of steel furniture (business group), "orders booked for electrical goods," malleable iron castings (shipments), contracts for industrial buildings (floor space), the production, sales volume, and earnings of many corporations. The variety of data which respond is, in the author's opinion, ample evidence of the empirical value of the method. By W. W. Hay. *The Annalist*, August 16, 1929, p. 301:2.

### **Labor Costs in the Building Industry —Their Compilation and Distribution**

Timekeeping, payroll distribution, the keeping of labor costs, the accounting organization, the bonus system, and the budgeting of labor costs in the Turner Construction Company are described in some detail. By S. Walter Johnson. *N.A.C.A. Bulletin*, Section II, September 1, 1929, p. 16:6.

### **Distribution of Selling and Administrative Expenses**

The various steps in the Norton Company's method of distributing Administrative and Selling Expenses for the purpose of presenting monthly Loss and Gain statements on each of its products are outlined in succession. In addition, its method of distributing the important item of Taxes, not included in the Administrative accounts, is also described. The principal items regarded as Administrative are listed as well as representative groups of General Selling Expenses and of Direct Selling Expenses. By J. F. Lovell. *N.A.C.A. Bulletin*, Section II, August 1, 1929, p. 1424:5.

### **The Moving Geometric Average**

The use of the moving average has become widespread because of the simplicity of its application in the computation of the trend of statistical time series. This method, however, has two essential disadvantages, which make it applicable only in a limited degree. The first of these is that extrapolation is impossible with a moving average; that is, it is not possible to estimate from the moving average the probable ordinate of trend even for the immediate future. Secondly, when the moving average is applied to a series with a non-linear trend, it introduces errors of greater or less magnitude in the same direction as the trend. It is this second

disadvantage which Mr. Pohlen discusses in this article. The conclusion which he reaches is that the arithmetic average must be used for linear series, and that for a geometric series the geometric average must be used. Even if the moving geometric average requires somewhat more labor on account of the necessity of using logarithms, it does yield for a geometric series a trend which does not everywhere contain errors (in the direction of the trend series). By Kurt Pohlen. *The Review of Economic Statistics*, August, 1929, p. 149:3.

### **Banking Concentration Challenges New York**

The growing tendency to concentrate banking power in the hands of a few large banks in such cities as Chicago, Philadelphia, San Francisco, Boston, Minneapolis, is tending to challenge the financial supremacy of New York and is bringing increasing financial independence to the great cities throughout the country. If, however, branch or chain banking should become nation-wide, the very existence of these powerful mergers, if they proved susceptible to being bought up, would facilitate and make more rapid the extension of New York control and might mean a new era of financial suzerainty for New York. Statistics on the degree of concentration and distribution of large banks accompany the article. By John Oakwood. *Barron's*, September 9, 1929, p. 5:1.

### **Cost Control with Fluctuating Production**

A description of a definite system for making up cost control sheets under fluctuating production by two employees of the Eastman Kodak Company. Numerous charts and tables are given. *Taylor Society Bulletin*, August, 1929, p. 160:8.



### Budgetary Control in the Organization of Hans Renold Ltd.

The objects of the budget system of Hans Renold Ltd., are as follows:

1. To facilitate the formation of general policies by showing their probable financial results, and so to enable the best use to be made of the resources available.
2. To evaluate the effects of changes in plans made necessary by unfolding circumstances, by the formulation of modified plans which are in known relation to the original ones.
3. To provide financial standards by which to judge performances.
4. To provide a basis for executive managerial control.

The organization, the accounting system, the budget, the procedure for establishing "programmes", and budgetary control of the Company are described in some detail. Appendices accompanying the article contain organization charts, accounting and budget forms. By C. G. Renold. *International Management Institute*, SR 1.e., F. 1, 16 pages.

### A New Era or a New Inflation?

No critic claims that our gold-reserve ratio is unsafe, for with an elastic banking system and credit methods widely trusted, large reserves are not vital. But expanded deposits do make it worth while to ask whether these enormous deposits mean inflation. Actually, the loans which these deposits represent are the high productivity of an active people, in a scheme which offers rewards for which we are willing to work.

After all is said against expanding loans for speculation, instalment buying, and new construction, the one important question is unanswered—what else could we have done with the accumulating capital? If it had not found these outlets, it would have had to find others, or run riot in

commodity inflation, or forced interest rates so low as to discourage saving.

The sort of inflation that exists today is the sort that does not blow up. With wants insatiable, energy abundant, and guidance as informed as it is today, there is no weakness in the economic situation serious enough to plunge industry into a major depression. By Seth Axley. *Barron's*, August 19, 1929, p. 3:3.

### Capital, the Money Market, and Gold

In considering the reasons for the present high money rates, so commonly blamed upon excess loans for purposes of stock speculation, Professor Edie arrives at the conclusion that the banking system is straining at the leash of its basic reserves and that fundamental limitations upon the growth of these reserves are vital problems of our money markets now and for the years immediately ahead. In substantiation new estimates of the amounts of world-stocks of gold money in 1913 and in 1928, as well as of the annual addition to gold-money stock since 1913 are presented. The famous 3 per cent estimate of gold requirement set up by Gustav Cassel is reconsidered and important adaptations of his method for purposes of analysis of the current situation are arrived at. Finally, there is presented an equation of gold and prices intended to state relations which are not directly embodied in the well-known equation  $(MV + M'V) = PT$  popularized by Irving Fisher. By Lionel D. Edie. *Studies in Business Administration*, The School of Commerce and Administration of the University of Chicago, Vol. 1, No. 1, 53 pages.

### Standard Financial Ratios for the Public Utility Industry

The following financial ratios are described: ratio of fixed capital to total assets; investments to total assets; current assets to total assets; other assets to total



assets; long term debt to total assets; current liabilities to total assets; total capital stock to total assets; preferred stock to total assets; common stock to total assets; surplus and reserves to total assets; current ratio; operating ratio; fixed charges to gross revenue; net income to gross rev-

enues; gross operating revenues to net worth. Frequency curves are presented in each instance, showing the average ratio of 200 public utility companies, for the period 1915-1924. The form of average used is the mode. *University of Illinois Bulletin*, No. 26, August 13, 1929, 44 pages.

## OFFICE MANAGEMENT

### Organization: *Job Analysis, Employment, Pay, Tests*

#### Some Aspects of Taylor's System of Scientific Management

Some of the aspects of Taylor's system of scientific management as applied to office work cover envelope addressing, the one best way and time study, the new duties of management, selection and training of employees, bonuses, and cooperation.

With regard to the application of scientific management to office work in Ceylon, it is believed that an investigation of its principles should probably precede by quite a long period any systematic introduction of the system, and it is possible that in the end only certain aspects of it would be applicable. In any case, the preliminary work of study and research should be exhaustive and unhurried. Taylor's repeated warnings against undue haste and his estimate of anything from two to five years as the period of experiment should always be borne in mind, together with the advice that each one concerned should know just what he is doing. By L. J. B. Turner. *The Ceylon Economic Journal*, June, 1929, p. 44:16.

#### Clerical Salaries

The United States Personnel Classification Board has completed an extensive investigation of the salaries of office workers. Difficulties in classification complicate the study as it applies to the higher grades

of salaried workers, but no such difficulties are encountered in the lower grades. In this group, for fourteen distinct occupations, average salaries in all employments and in classified employments are given in tables. Average salaries are given in different lines of business and comparisons are made by occupation, by locality, and by size of city. *Service Letter*, August 26, 1929, p. 3:2.

#### Errors in Judgment

A study of the correlation between accuracy in self judgment and intelligence reveals the following general characteristics: more intelligent subjects make better judgments of themselves than less intelligent subjects, and less intelligent subjects judge their undesirable traits better than their desirable ones, whereas the opposite holds at least to a slight degree for more intelligent subjects. Subjects with a greater amount of conceit do not judge themselves as well as subjects less conceited. By T. A. Jackson. *Journal of Applied Psychology*, August, 1929, p. 372:6.

#### Personality Difficulties of College Graduates

The Director of the Yale Graduate Placement Bureau gives suggestions concerning causes and means of eliminating them. By Samuel S. Board. *Taylor Society Bulletin*, August, 1929, p. 180:3.

**Administration: Regulations, Supplies, Communications****A Survey on the Effect of Departmental Consolidation on Cost—Office and Factory**

From investigation of the practice of three outstanding companies the following conclusions are drawn:

Decentralization results in prompter work. When the time element is of major importance, whether in service to customers, in supplying operating figures while they are still hot, or in holding down interest charges through prompter collections, decentralization is uniformly recommended. But centralization cuts costs in every respect. By combining the functions of various departments in a way that brings about consolidation and simplification, the number of sections, divisions and departments is reduced. This almost inevitably results in cutting the office ex-

pense. By Arthur Van Vlissingen, Jr. *N.A.C.A. Bulletin*, Section I, August 15, 1929, p. 1451:15.

**The 3 Ways to Cut Costs**

Of these three ways of cutting costs, which would save you the most money: 1. making betterments in the existing method, 2. substituting an entirely different operation, or 3. eliminating the operation? The manager of the Bureau of Methods, General Electric Company, tells which he favors, and why, giving examples of some of their operations. The department head who reverses the order of these possibilities, concentrating first on 3 and 2 will not find himself wasting much time on number 1, thereby profiting for his employer and himself. By H. M. Harman, *System*, September, 1929, p. 31:4.

**Training and Education: Schools, Libraries, Employee Publications****The Bank's Best Asset—Brains**

The big waste in our banks today is not in rubber bands, pins, clips, nor in failure to turn off the electric lights, but in brain power. This waste is reflected in costly mistakes made through ignorance, and by long delays and inefficiency, all of which are the natural consequence of not knowing the best course to pursue. It is not that economy in small things should be neglected, but certainly a strict economy in little things should not be the main objective of a bank—at the expense of some of the bigger things, such as the education of employees.

Employees who ask questions are usually the ones advanced, Mr. Morehouse has observed. There is so much to be gained by encouraging employees to ask questions that it would pay some of our large banks

to establish in their organizations an Information Department for Employees Only. Bank employees should be encouraged to ask questions regularly, for when they do, the intelligence of that bank's staff is going to soar to heights never dreamed possible. By W. R. Morehouse. *The Burroughs Clearing House*, September, 1929, p. 15:3.

**Company Training for College Graduates**

A survey of current practice in the matter of company training for college graduates extending from the elaborate training afforded by such programs as the "Test Course" of the General Electric Company and the formal six months' course of R. H. Macy & Company, Incorporated, down to merely excellent provision for training on the job by carefully supervised work such as the plans

of the W. T. Grant Company and of the Irving Trust Company. The article contains excellent descriptions of the programs of a number of companies. By Jonathan T. Lincoln. *Harvard Business Review*, July, 1929, p. 432:12.

#### Measurement of Results Obtained by a Public Contact Training Program

In the case of the public-contact employee, a test of how much he knows about what should be done and how to do it, will not be indicative of his ability to apply that knowledge unless the actual product—customer attitude or customer impression—is measured. The first reason for measuring the results of public-contact training is the desire to know what improvement, if any, has resulted from the training work. Regardless of the method chosen, it will be successful chiefly in proportion to the interest aroused in it on the part of the executives, supervisors and employees.

Various methods of measurement are outlined. *Serial Report of the Industrial Relations Committee*, National Electric Light Association, July, 1929. 5 pages.

#### Training Plans for Junior Executives

Training junior executives for prospective duties is an important part of the program of progressive management today. Typical programs which are finding successful application are described, and include those in the following organizations: American Rolling Mill Company; Bethlehem Steel Company; Boston Edison Electric Illuminating Company; Henry L. Doherty & Company; General Motors Corporation; Group of Retail Stores; Harvard Business School; Jordan Marsh Company; R. H. Macy and Company; Massey-Harris Company, Ltd.; Standard Oil Company of New Jersey. Policyholders Service Bureau. Metropolitan Life Insurance Company. 40 pages.

#### Employee Service: Hygiene, Recreation

##### Good Health for Workers

No bookkeeper, stenographer, or other person called upon to do desk work, should permit the head to be tilted forward and the neck bent. The leaning forward should be from the hips, not from the shoulders. By observing these rules interference with the great blood vessels passing through the neck will be avoided.

Men of sedentary habits cannot gorge themselves with food and live long and useful lives. The chief faults of office workers and business executives are these: They overeat, undersleep, get too little exercise and sunshine, live too much in vitiated air; take too little recreation, and give way to worry. By Royal S. Cope-land. *Management*, August, 1929, p. 77:3.

#### Records: Forms, Charts, Cards, Files, Statistics

##### How Eight Forms Systematize a Variety Chain

The forms used by the Sprouse-Reitz variety chain are planned not only to give efficient records to be submitted to the headquarters office but also to teach men how to buy, sell, and display merchandise. Among them is the *Lineal Foot Display*

*Form*, which designates a given number of lineal feet of counter space for the display of each different kind of merchandise; the *Merchandise Call List*, which enables management to keep abreast of new demands and supply popular needs at all times; the *Report of Merchandise Received*, which by showing the net profit received

from each invoice of merchandise proves an accurate means of checking shrinkage at inventory; the *Checking List for Candy Department*, which yielded an increase ranging from 3 to more than 12 per cent of sales during the few months that the

form was used; and the *Weekly Store Report*, which contains information that permits the main office to make a complete balance every week. By Naomi Swett-Sommers. *Office Economist*, August-September, 1929, p. 5:3.

## PRODUCTION MANAGEMENT

### General: Promotion, Organization, Policy, Development

#### American Branch Plants Abroad Bring New Problems

The manufacturers who have been saying that we can't compete with cheap foreign labor are now going abroad to operate factories with that same cheap foreign labor. Before the world war, only four American corporations had launched branch plants abroad to any extent, but in the last three years it has been a mad rush. It is estimated that we have already poured about \$500,000,000 into branch plants. Even if we are sending away some of our surplus capital, we are sending it away at a rate which, if long maintained, will account for a great deal of it. But more important than that, we are building up abroad a network of competing industries. Other factors may enter in, such as political upheavals, with the necessary protection of threatened industries. By Chester M. Wright. *Printers' Ink*, September 12, 1929, p. 3:4.

#### Spacing Lights for Shop Illumination

In new factories the trend is toward general illumination with the units symmetrically arranged. This requires fewer outlets and is more flexible, rearrangements of machines not necessitating a change in the wiring outlets. The spacing between the reflectors should be approximately one and one-half times the distance from the working plane to the bottom of the units. This will give an illumination on vertical surfaces of approximately two-thirds of

that on the horizontal surfaces. Proper lamps are important as under-powered lights give spotty illumination and over-powered lamps cause a glare. By Louis J. Cahill. *American Machinist*, August 15, 1929, p. 277:3.

#### Emigrants of American Industry

The new policy of American manufacturers in establishing large branch factories in foreign countries is being viewed with widespread alarm both here and abroad. In the establishment of Ford factories in Great Britain, Germany, France, and the purchase by General Motors of existing plants abroad, the automobile industry has furnished the most conspicuous example of this new policy, but the movement ranges from the largest machinery to shaving soap, tooth brushes and chewing gum. Even important French dress-making establishments have fallen into American control.

Mr. Anderson refutes the various arguments which have been advanced against the movement. He believes that neither this country nor other nations ought to feel any unfavorable results inasmuch as the movement is founded upon economic principles.

Even if it were desirable to control the spread of such a policy there are not means of so doing. In fact, other countries are now following American example. Even at present British automobile manufacturers are building American facto-

ries. Dutch aeroplane concerns have established giant factories in this country. French perfumers, Italian macaroni makers, even Mexican hot tamale makers have

followed suit. At present the tide has turned the other way. By George E. Anderson. *American Bankers Association Journal*, September, 1929, p. 201:4.

## Industrial Economics: Labor and Capital, Legislation, Wage Theory, Immigration

### High Wages—High Production

No trends in industry are more firmly set than these two associates, higher wages and shorter working hours. An exploration back to the beginnings of industry shows that there has never been a recession in either tendency, although there may have been minor fluctuations due to special causes. Therefore, there is no occasion for surprise to find these two movements strongly emphasized in the prosperous period, 1922 to date. They will persist, and the industrial manager who determines his operating policy in line with them will be adding another element to insure the success of his concern. By L. P. Alford. *Factory and Industrial Management*, September 1929, p. 549:3.

### Ten Years of the International Labor Organization

The Director of Research, Industrial Relations Counselors, gives a report of the recent conference held in Geneva. By Glenn A. Bowers. *Factory and Industrial Management*, September, 1929, p. 593:4.

### The Panaceas for Unemployment

The idea of using governmental demand for labor in order to relieve cyclical unemployment, must be thought of not as a panacea but as a measure which promises to be very helpful. The indications are that the *laissez faire* ideas concerning employment which have heretofore prevailed, are destined gradually to disappear. No matter how much some may decry paternalism, the tendency is for government to do more and more to safeguard the common welfare.

The day is coming when it will be considered a duty of organized society to see that every citizen who wishes to work is able to obtain employment at a reasonable wage, despite the unfortunate experience of England and other European countries with unemployment insurance. One of the early steps in this progressive movement is likely to be the use of public works and public purchase as a means of stabilizing the demand for labor. By Willford I. King. *The Burroughs Clearing House*, September, 1929, p. 25:4.

### Shorter Periods of Labor Advocated

The director of the Women's Bureau of the Department of Labor advocates shorter hours and a five-day week to relieve unemployment among women. *U. S. Daily*, September 3, 1929.

### Five Day Week Gaining Impetus

To obtain the extent of the five-day week movement in the building industry, S. W. Straus & Co. has made a national survey of industrial conditions. The result of this survey shows that the trend is rapidly swinging to the shorter work week and that at this time approximately 25 per cent of the building mechanics of the country are now working on the basis of the forty hour week. The motivating force and backbone of the five-day week movement is furnished by the building workers of the metropolitan district of New York. It is estimated that of the 200,000 building workers now on the five-day schedule 150,000 of them are New York craftsmen.



There are practically no strikes of building mechanics at the present time. Wage rates for building workers throughout the United States are the highest in history.

There is an important change taking place due to the high wage scale structure and the adoption of the 40-hour week. The builders point out that in order to cope with these conditions, contractors are demanding a maximum of efficiency from all building workers. This requirement has begun to eliminate mechanics beyond the age of fifty, and as a result there is a

large surplus of building mechanics who are unable to find employment in practically all the large cities of the United States and Canada, with the possible exception of New York City.

Opposition to the establishment of the five-day week is voiced by Oscar W. Rosenthal, President of the Builders Association of Chicago, who believes that it will not aid existing unemployment. Representatives of the organized building workers believe that it will. Report of S. W. Straus & Co. September 1, 1929. 4 pages.

### **Employment: *Classification, Selection, Tests, Turnover***

#### **The Southern Negro**

An excursion into the psychology of making men like work including inherent characteristics of the negro and necessary qualifications for his effective supervision. By H. C. Hix. *Factory and Industrial Management*, September, 1929, p. 559:3.

#### **The Human Factor in Substation Operation**

A battery of tests adapted and devised for the selection of electrical substation operators is reported. The chief duties of these operators after careful job analysis and the plotting of a job psychograph were defined as (1) the manipulation of numerous and extremely complicated apparatus for transforming and regulating voltage, etc.; (2) the reading of meters; and (3) care of the station and its equipment. In determining methods of testing aptitudes for this job, the duties under (3) were distinguished from those under (1) and (2); and normal conditions of operation were sharply distinguished from emergency conditions. Seven specific essential abilities were isolated after careful analysis. These are:

- a. Ability to learn and to recall in proper order the complex series of switching operations with which the operator must be familiar.

- b. Accuracy in following directions and in employing knowledge of substation operation in switching and blocking.
- c. Ability to comprehend readily instructions given either verbally or in writing.
- d. Persistence in keeping at a problem until it has been solved, or until the operator has satisfactory reason for believing that the problem cannot be solved by the methods at his disposal.
- e. Judgment and analysis in solving a new problem, e. g., in locating and remedying trouble.
- f. Ability to give co-ordinated attention to a member of different operations or things at the same time; to spread attention over the details of a blue print; over the correct switching handle, ammeters, etc.
- g. Ability to carry in mind the location of equipment in substations and an image of wiring arrangements, etc.

After experimentation ten tests given in three series were adopted for selective purposes: Series A, five tests of paper and pencil type; Series B, four performance tests; Series C, switching control test to measure ability to operate under emergency conditions. A validation of the latter series is not complete.

Eighty-four operators were tested and



scored, and for statistical purposes were divided into three groups: Best, Average, and Poorest. Tests scores were compared with the number of operating errors (the latter was disclosed to be in itself a criterion for classification), and statistical reliability computed. The tests are presented as having justified their use for the selection of assistant operators to be trained in substation operation. By Morris S. Viteles. *Personnel Journal*, August, 1929, p. 81:33.

#### **Contract Work Said to Have Improved Income of Operatives in Silk Industry**

Development of contract work in the Paterson, N. J., silk industry has improved the financial condition of operatives, but reduced the volume of employment. Under the contract system two groups are sending work to contractors to be woven—commission merchants and independent producers who have taken on orders beyond their capacity. Figures of the Census of Manufactures show that the Paterson silk industry employed almost identical numbers of wage earners in 1927 and in 1904, employment having risen to much higher levels in the intervening years. In 1928 about 75 per cent of the contract shops had fewer than twenty looms. Data from the *Industrial Bulletin* issued by the New Jersey Department of Labor show average weekly earnings of \$26.74 for all classes of silk workers in March, 1929. However,

the data do not cover turnover, or working hours, or the range of earnings that went into the making of the figure showing average earnings. *United States Daily*, August 20, 1929, p. 2:2.

#### **Industry Through the Eyes of Youth**

The question of what young people think about their employment is of great importance because what they think is true to them and helps to determine their whole attitude. Some of the answers to an enquiry sent to young factory workers stated that rest pauses were most desirable during the morning and a cup of tea was liked with the afternoon rest pause. In answer to the question regarding an increase in wages only one girl gave the reply that it depended upon trying to do one's best. All the others stated that "You must be a favorite," and "If you are friendly with the person in authority." Opinions were thereby. As to the best time of the day rather than changing about, because it was felt that greater skill would be gained thereby. As to the best time of the day for work the answers were nearly all in favor of the morning, and the output of work was believed to be greatest during the middle of the week, which latter is a confirmation of scientific observation for many years. By A. H. Russell. *Industrial Welfare and Personnel Management*, September, 1929, p. 293:5.

#### **Training and Education: Schools, Libraries, Apprenticeship, Employee Publications, Bulletin Boards**

##### **The Foreman's Place in Personnel Administration**

The old type hard-swearing boss has passed from the industrial scene. The foreman of the 1929 model is a leader and a teacher rather than a driver. Often he is an expert technician with an engineer's point of view regarding his job and the operations of the factory in which he

works. Some of the newer problems requiring his help which have arisen within the last few years include over-expanded capacity, keen competition, active business often at low profit margins, and urgent need to increase distribution. Obviously one of his first duties is to keep up efficiency and to keep down costs in his own department. It is no longer sufficient merely to get out production. An important development of

very recent years has been the increasing stability of labor and the greater regularization of employment. The foreman must assume his share of responsibility in this, and also in the administering of incentive methods of wage payment systems, with a maximum of accuracy and intelligence. By Edward S. Cowdrick. *Pacific Factory*, August, 1929, p. 14:2.

#### **The Central Institute of Labor**

The scientific secretary of the Central Institute of Labor gives a Russian contribution to the sciences of work and workers' education, including results of training courses. By V. Mouravieff. *Taylor Society Bulletin*, August, 1929, p. 168:8.

#### **European System for Technical Education Has Potential Field in America**

This article is a collection of opinions of a paper by Mr. W. E. Wickenden which compared American and European methods of conducting technical education. In his paper Mr. Wickenden recommended the use of methods used by schools he investigated in France, Great Britain and Germany whose courses are for young men already in contact with industry and who wish specific preparation for advancement. He also recommended some form of national certification. *Mechanical Engineering*, September, 1929, p. 678:4.

#### **When Trained Men Are Needed**

The advice "train apprentices" does not tell employers how to secure the number of machinists needed immediately for employment as tool and die makers, operators of milling machines, horizontal and vertical boring mills, engine and turret lathes, and automatic screw machines, and for bench hands. The master key used by the companies which are today corraling their share of machinists is: Today mechanics are where you find them. Blue-print and micrometer men are working as park guards, as radio service men, as refrigerator

and oil-heater salesmen, are farming on their own, running filling stations and milk routes, or are acting as private chauffeurs. On the whole, however, machinists are the world's best recruiters of machinists. If the company must go outside the community to find machinists, two factors are prime essentials for success. The first is persistent concentration in the labor market the company elects. The other is a whole-hearted co-operation on the part of the company's shop supervisors. By Kenneth Coolbaugh. *Nation's Business*, August, 1929, p. 42:4.

#### **Work to Hold Your Apprentices**

The employer who wishes his apprentice training program to continue after the first enthusiasm has passed, who wishes to maintain the morale of his apprentices, will need to keep two considerations in mind: Apprentice morale depends first on full recognition of each apprentice as an individual, with his own peculiar character and tendencies; and second, on keeping alive a strong group consciousness or *esprit de corps* among the apprentices. Each apprentice needs to be shown that the officials know him and understand him, or at least attempt to understand him. The apprentices also must be made to understand that they are a group apart, that for them training is more important than production in theory, although learning to produce is an important part of training, and that more is expected of them in diligence and interest than of the regular employees. By C. J. Freund. *Iron Trade Review*, August 15, 1929, p. 381:3.

#### **How to Keep Men Interested**

A workman may be highly skilled in his job and yet not be a satisfactory worker unless he likes what he is doing. Therefore a foreman must be quick to recognize and build up desirable interests in his men. This is difficult to do unless he has an instinctive liking for them. Another way to get their interest is to quickly locate and

correct troubles which have been holding them back. A cheerful atmosphere in the shop is of great help. Another important feature is good planning; shop details must be watched. Keeping the shop in order, tools in condition, orders checked, and stock ready makes each man feel that his work is part of an orderly whole. Lastly, a foreman must know his men. This is the fundamental basis of the whole problem of keeping the men interested in their work. By G. F. Buxton. *The Foreman's Magazine*, August, 1929, p. 10:3.

#### Teaching of Mechanical Engineering

Eighty-nine deans, professors and instructors attended the three weeks S. P. E. E. Summer School for Engineering Teachers at Purdue University this summer. It was agreed that a broad training in fundamentals is of more value than attempts to be specific. Good English was stressed. The engineering education must broaden at the top. Purely technical subjects should be augmented by some of the economic and social sciences. The need is for a course of five years or more, the additional time to include more liberal subjects. It is the teacher's responsibility to add to that philosophical understanding which comes with a sympathetic interpre-

tation of the classics and cultures of the past, that creative and progressive spirit of the engineer whose eyes are forever pointed to the future. *Mechanical Engineering*, Sept., 1929, p. 711:2.

#### Classes for Open-Hearth Furnacemen

In changing their furnaces from gas to oil-fired, the Lukens Steel Co. was faced with the problem of inexperienced operators on the new type of equipment. It was decided to institute training classes meeting on certain afternoons after change in shifts. Four lessons were given each man. Models of furnaces were used and talks were given by the fuel engineer and the open-hearth superintendent. There was a time for questions either on the floor or through the question box. Printed notes of the lectures were given at the last lesson.

The result of the change was an improved efficiency of the whole plant and the course of instruction was thought worthy of repetition at 6 month intervals. The general outline of the course will remain unchanged though emphasis can be placed on phases which the plant records show need attention. By Martin J. Conway. *The Iron Age*, September 12, 1929, p. 671:2.

#### Benefit Systems and Incentives: *Group Insurance, Pensions, Vacations, Profit Sharing, Wage Plans, Suggestions, Stock Ownership*

##### U. S. Rubber to Form Funds for Bonuses

The United States Rubber Company has announced a bonus plan and a managers' shares plan which will be submitted to stockholders for approval on October 15.

Three classes of awards are provided for under the bonus plan: Class A, Class B, and Class C. Class A awards may be granted for conspicuous service of any kind and will be granted irrespective of the earnings of the company. Class B awards

may be granted to those who have contributed most in a general way to the success of the company by their ability, industry or loyalty. Class C awards are granted to employees who equal or excel standards of performance.

The managers' shares plan involves the formation of a trust fund to which the company will issue 100,000 shares of the common stock, at \$35 a share, receiving in return 100,000 trust shares of no par value. The company agrees to credit to the fund a sum equal to the amount which goes into

the fund for the payment of the awards under Class B bonuses. When the payments to the fund from the company have aggregated \$3,000,000 and upon receipt by the company of \$5 a share for each of the trust fund shares, through their sale to employees of the company occupying responsible positions upon prices and terms to be fixed by the finance committee, the common shares of the company turned over to the trust will be deemed fully paid. *The New York Times*, September 10, 1929.

### Suggestion Systems

A condensed report of a few suggestion systems is presented, including those of the Edison Electric Illuminating Company of Boston, the Brooklyn Edison Company, the Consumers Power Company, the General Electric Company, and the Westinghouse Electric & Manufacturing Company. *Serial Report of the Accident Prevention Committee*. National Electric Light Association. August, 1929. 22 pages.

### Customer Satisfaction Is Our Bonus Yardstick

The Director, Efficiency Division, Eli Lilly & Company, describes their quality incentive which aims to: (1) increase the quality of the items manufactured, (2) increase the accuracy of filling materials into containers and labeling them, (3) reduce the number of customer complaints. By Earl Beck. *Factory and Industrial Management*, September, 1929, p. 579:3.

### Profit Sharing

An employee of Sears, Roebuck & Co. who becomes a member of their profit-sharing plan contributes 5 per cent of his salary at each payroll period. No employee may deposit more than three hundred dollars a year in the fund. In addition to the amount contributed by employees each year, the company subscribes seven and a half per cent of the net profits of all its holdings,

mail order, retail and factories. These two sums of money are reinvested by the board of directors, the earnings of which are again distributed among the participants in direct ratio to the amount they have deposited. The depositors are divided into three groups, according to their length of service. Group A consists of members who have been employed less than five years. The B group represents those who have seen five to ten years of service, and group C are those who have been with the company for ten years or over. The profits are prorated among the members based upon their deposits, except that the participation of group B is based upon one and one-half times their deposits during the previous year and that of group C is based upon twice their deposits during the previous year.

Points as to the withdrawal of profits are given, and a table illustrates the operation of the fund and the benefits derived therefrom. By Gen. R. E. Wood. *Chain Store Age*, September, 1929, p. 52:4.

### Profit-Sharing Plans Varied in England

A report from the consul at Birmingham and just released by the Department of Commerce says that:

In some cases the bonus automatically rises or falls with the dividend rate. Cash bonuses are said to be the basis of about 40 per cent of the existing schemes. Some plans provide for bonuses to be invested in the capital of the undertaking, or in provident, superannuation, and kindred funds.

Out of the 312 schemes said to be in operation at the present time, apart from those connected with co-operative societies, 132 provide for some form of shareholding by employees. Since the war, the form of shareholding in which shares are issued to employees on specially advantageous terms has been much in favor. Although the firms which have these schemes in operation employ about 184,000 workers, only

about 37,000 of the workers participate in the schemes, the remainder being unable or unwilling to exercise the privileges offered. The average amount per head received under bonus schemes ranges from about \$24 to \$47, it was stated. *U. S. Daily*, September 3, 1929.

#### Old Age on the Balance Sheet

The subject of pensions is receiving increasing attention from industrial concerns. This article gives a careful analysis of existing plans, describes difficulties incident thereto and mentions some alternatives, giving provisions of the group annuity plan in some detail. Some companies having this plan are: Western Clock, Cleveland Railroad, Metropolitan Life, New York Stock Exchange, St. Joseph Lead and Eastman Kodak. Good, humane management will not permit long service

employees to be discharged if they have not adequate means of sustenance. Yet good management cannot keep employees when they are no longer productive. The solution is the inauguration of a sound and adequate pension plan. The longer the solution is delayed by business organizations, the more expensive it becomes. By M. B. Folsom. *Atlantic Monthly*, September, 1929, p. 399:8.

#### The Point System of Wage Payment

This article deals with the practical setting of standards and computation of earnings under the point plan of payment. A following paper which will summarize arguments for and against the plan will be published later. By Ralph M. Barnes. *Factory and Industrial Management*, September, 1929, p. 566:3.

#### Shop Organization: *Planning, Methods, Job Analysis, Standardization, Waste*

##### Forging and Stamping Equipment

One of the first things considered in modernizing Transue & Williams plant was the improvement of transportation methods. Standard skids are used holding approximately 4,000 lbs. These are handled by a battery of lift platform electric trucks one of which is provided with a boom and hoist for lifting dies. Good floors in the shops, areas around the shop and roadways connecting the buildings are necessary for truck transportation. Those put in have a six-inch concrete base, one-inch slag cushion and paving brick surface. *The Iron Age*, August 22, 1929, p. 467:6.

##### Assembling an Airplane Engine

After assembly of every Wright whirlwind engine it is given a run of 5 hours, driving a four-bladed propeller. If it measures up to established standards, it is then disassembled, thoroughly washed, minutely

inspected and examined for flaws, then taken back to the assembly line and carefully reassembled for delivery to the purchaser. After being weighed, dry, it is then greased and oiled, taken to the final testing room and run for 2 hours, where a final record of its performance must meet the same standards. Then it is retouched and is coated with slushing oil for protection, numbered, registered and crated for delivery. By Fay Leone Faurote. *The Iron Age*, September 5, 1929, p. 597:1.

##### Insuring Weld Reliability by Testing Welders

"A weld is as strong only as its weakest part and its quality is a direct reflection on the ability and intelligence of the welder."

Every four or six weeks a general test of the work of each welding operator is made. There are standard finish tests, bend tests, T-weld tests and tests on oil and steam



tight welds. The T-weld furnishes the most economical means of testing the welder's ability. Grading is done by three men: a welding engineer, a welding inspector and a practical welder. Appearance is first rated. Then the weld is broken by applying pressure to the upright plate on the side opposite to that on which the weld is made and rating is given according to the actual amount of clean metal in the break.

These tests are followed up with a reward or penalty for good or bad work. By Paul Orr. *American Machinist*, August 22, 1929, p. 329:3.

### **Mechanical Handling Tips From the Tire Maker**

A system of mechanical handling of sufficient flexibility to meet the requirements, which is still comparatively simple, has been installed at the cord-tire factory of the Pennsylvania Rubber Company. It consists of a series of conveyors of different types, overhead chain and hanger, steel platform, and belt, which individually and collectively, possess several interesting features both of construction and operation. The results show what can be done in the way of lowering production costs by controlling the volume of material prepared, and in expediting its movement through the different processes. In the curing processes, the amount of manual labor required has been reduced to a minimum by the development of a carefully planned, interlocking system of material transfer whereby a continual circulation of tires and accessory equipment is secured. By A. C. Bowers, *Factory and Industrial Management*, August, 1929, p. 279:4.

### **Lacquer Department Conveyorized**

The Studebaker Corporation doubled its output, saved 15 per cent on labor, and reduced rejections in its lacquer department 25 per cent by installing a new conveyor system. The hoods are carried through all operations in the department by an over-

head chain conveyor. The department is served by two conveyor lines, one for hoods and one for other parts. Both conveyors are constructed of 4-inch I-Beams with steel angle supports, two-wheel trolleys running in the I-Beam with standard H attachments connected by heavy drop forged chains. This extensive system was decided upon as an alternative to constructing additional building units at high cost. By Burnham Finney. *The Iron Age*, September 12, 1929, p. 659:4.

### **Material Control in a Locomotive Crane Plant**

The Ohio Locomotive Crane Company's material control and cost system requires no additional personnel. In fact, there are fewer people on the payroll than at the time the control was installed. By means of a carefully planned system the following factors are constantly watched: (1) the amount of all materials on hand and their condition; (2) the amounts which will be required over a definite period of time; (3) the amounts that have been ordered and the time when they will arrive; (4) the cost of all materials and quantities which can be economically manufactured; (5) manufacturing capacity with existing facilities; (6) raw material price fluctuations; (7) source of supply. By Lawrence C. Haaser. *N. A. C. A. Bulletin*, Section II, August 15, 1929, p. 1471:5.

### **Assessing Obsolescence of Patterns**

The common procedure of culling out obsolete patterns whenever the storage space has become cramped does not provide an efficient solution to the problem. Effective methods of the companies which co-operated in a survey are reported:

A definite time interval of inactivity has proved a satisfactory basis in some companies for determining when a pattern should be discarded, in some the engineering department or the sales department makes the final decision, a few retain all patterns while others have found it better



business occasionally to replace a pattern which has been destroyed than to invest thousands of dollars in storage facilities for those which are not moving. Where under ordinary circumstances only specific parts of a unit require replacement, it is necessary to retain certain classes of patterns but not others. Storage of customers patterns presents a problem in the jobbing foundry. A reclassification system supported by a time limit is successful in some companies; and a card system for pattern vaults and periodic surveys are general principles of efficiency in handling this problem which may be adapted to the needs of the firm in question. *Iron Age*, August 1, 1929, p. 275:3.

#### Handling Forgings, Dies and Stampings in Transue & Williams Plant

Trimming presses have two belt conveyors for each row of machines. One is directly below the machines and carries the forgings, the other runs in the opposite direction and carries the flashings.

The introduction of an overhead endless chain conveyor in the stamping department has reduced handling costs, speeded up production and has cut down the amount of work stored on the floor. This conveyor loops through the press room, assembly room, inspection, pickling and annealing departments and the shipping platform.

Sixty per cent of the stampings can be handled by the conveyor.

Chain conveyors are also used in the annealing department where the work is done in an oil-fired furnace 22 ft. in length. Work remains in the furnace  $2\frac{1}{2}$  to 3 minutes. *The Iron Age*, September 5, 1929, p. 601:6.

#### Variety No Bar to Mass Production

Difficulties of obtaining an economical operation increase in direct proportion to the variety of product made. The problem then is giving the variety wanted at a price that reflects mass production. This plant divides the shop, one end being devoted to motors over 70 H. P., the other to motors less than 70 H. P. Flow of work and handling materials is most important where straight-line flow is not permitted. The greatest opportunity for further economy lies in reducing the time of putting a piece in a machine and taking it out. Many roll-over frames are used which save the workman from stopping and stretching. No one method of handling materials will suffice, a separate study being necessary on each operation. Inspection is made after each operation. Nine per cent of all labor in the plant is employed in inspection. *The Iron Age*, September 19, 1929, p. 723:7.

#### Production Records: Time Cards and Performance Records

##### Look Where You're Going

The Office Manager—Factory Accounting, of Automatic Electric, Inc., describes a visual control of production cycles. A board, a card and a handful of colored pegs make a control system that may be hung on the wall. Some of the results obtained from the operation of this plan as compared with ordinary job-order scheme may be enumerated as follows:

1. The cost of supervision is reduced. The set-up men are the supervisors of their respective machine groups.

2. Planning is simplified. The control board shows the status of the department at any time.

3. Time keeping is simplified. The checking in and out on individual operations is eliminated.

4. Clerical work is reduced to the minimum. No progress records are required.

5. The foreman has time really to supervise his department. When information regarding any of the work is desired, the individual goes to the control board and gets it, without interrupting anyone.

6. Costing the output is simplified. One entry from the tally sheet gives the total labor expended on any job.

7. Defective workmanship is practically eliminated. The operators are not paid for defective work.

8. The group spirit is introduced, with all the employees in the group working together to produce quality work in the shortest possible time. By W. B. Nelson, *Factory and Industrial Management*, September, 1929, p. 555:3.

## MARKETING MANAGEMENT

### Is Sales Management an Exact Science?

Insofar as the actual managing of salesmen is concerned, it should not take more than a fifth of the sales manager's time. If a firm is functioning properly as to its manufacturing processes, costs, advertising, styling and service, then its sales department should function equally as smoothly and with a minimum of supervision, providing it is organized along the lines of proved methods. That is, the sales manager who has his job standardized will have 75 per cent or more of his time free for the most important part of his work. That today is a matter of research and a study of the people who buy and use what is sold rather than of the people who sell it. It is necessary to watch style and its causes carefully and to watch changing trends in general selling methods rather than to be blinded by the details of the present one. By J. K. Macneill. *Printers' Ink*, August 29, 1929, p. 17:4.

### The American Woman: Gauge of Consumer Preference

It has been left to Mrs. Consumer to discover the great secret of the American consumer's prosperity. This secret consists of the following series of chess-like moves which work out to the desired end: Move 1. The manufacturers agree to research Mrs. Consumer's needs and to set up high standards of goods at a fixed price low enough to be within general reach. Move 2. The manufacturer agrees to trade mark his goods and to advertise them with reliable, educational advertising. Move 3.

It is agreed to keep advertising clear of misrepresentation and fraud. Move 4. Mrs. Consumer agrees to have faith in consumer advertising. Move 5. Mrs. Consumer further agrees to adopt a free spending attitude on condition that the manufacturer pay high wages and lower his prices as much as possible. Move 6. The distributor agrees to increase his range and scope and speed up service. Move 7. The final step is the investment by consumers and employers and distributors in the widely distributed capital stock of companies which have well known trade mark names. By Mrs. Christine Frederick. *Advertising and Selling*, September 4, 1929, p. 36:1.

### The Threat of Leviathan

The volume of chain store business in the United States has grown from 4 per cent of the total annual retail volume in 1921 to 16 per cent in 1928. There are more than 100,000 of these chain stores, operating in 55 different fields of commodities. If this trend continues it is impossible to predict what the result in storekeeping will be. The executive head of John Wanamaker's believes that all desirable ends attained by chain organization can be gained by other means and that the individual and society may best be served by the survival of independent merchandising, which is already adopting the chain store's scientific methods of storekeeping based on science and experience.

Standardized and trade marked merchandise satisfies in articles of common use where individuality is not desired, and can

be sold by the chains. On the other hand, chain stores do not foster creativeness in manufacture, nor stimulate the application of art to merchandise. Only individual demand of an artistic and intelligent class, operating through individual initiative of an individual store, can bring about this higher standard of living. By Joseph H. Appel. *Retailing*, September, 1929, p. 3:1.

### Chains Have Evils, Too

This discussion, by the Chairman of the Board of a prominent system, says that chain stores will have to stamp out their own evils, so that the ethical ones are not tarred with the brush that blackens the sharp ones. He also answers some of the most frequent criticisms. By W. T. Grant. *Nation's Business*, September, 1929, p. 33:4.

## Sales Promotion: Letters, House Organs, Advertising

### Industrial Advertising and Selling

A report of a conference held under the auspices of the National Industrial Advertisers Association and the Industrial Committee of the Association of National Advertisers, Inc., in conjunction with the United States Department of Commerce.

Most of the document deals with selling in foreign markets with such papers as "International Aspects of Industrial Marketing," by Nelson S. Greensfelder of the Hercules Powder Company and papers by various members of the Department of Commerce on export trade for particular lines of business. May 10, 1929, p. 3:80.

### A Railroad Quits Order-Taking and Begins to Sell

The recent rise in the market value of railroad securities is ascribed by many economists to be due to the greater security of position built up by the roads through such aggressive plans as that of the Chicago and North Western Railway Company. This railroad began by providing a product of the highest possible quality, and in order to do this it rebalasted its roadbed. Then the company spent \$4,000,000 in installing automatic train control. New and finer equipment was introduced, including such features as private bedrooms, radio, telephone, market reports, maid and valet service, and shower baths. Then an intensive educational campaign was conducted among the engineers. A courtesy campaign that embraced all employees fol-

lowed; they now hold regular meetings themselves and discuss ways and means of better pleasing the public and of improving the service. The representative at the ticket window or information desk is no longer content merely to answer questions and be done with the inquirer; he manifests an alert interest, volunteers additional information, proposes to map out the trip and to take care of all the details. Failing to "close the sale," he obtains the name and address of the prospect, who is "followed up" at the proper time. By Fred W. Sargent. *Sales Management*, September 14, 1929, p. 481:3.

### The Merchandising Significance of Retail Profit Sharing

Within a short time, three organizations, McKesson & Robbins, the Vick Chemical Company and E. R. Squibb & Sons, have announced plans for allowing their distributors to share in company profits. These plans represent a new effort to work out distribution problems that are troubling manufacturers in many fields. All of them have one or two points in common. They give the retailer stock on advantageous terms. The Vick and Squibb plans show that both companies have made more than 100 per cent profit for the retailers who took advantage of previous stock ownership offers. McKesson & Robbins points out that if retailers buy the maximum amount allowed "there is represented an

immediate profit to them of about \$1,000." By Roy Dickinson. *Printers' Ink*, August 22, 1929, p. 3:4.

### Squibb Squib

E. R. Squibb & Sons has the following plan by which retailers may become not only stockholders but profit-sharers as well:

If a dealer has made annual purchases of \$500 a year from Squibb he is allowed to buy ten shares (at \$50 each) of the 6 per cent cumulative Distributors Preferred stock of a new company, Squibb Plan, Inc. With each \$50 he puts in, Squibb Plan buys a share of the parent company's common, now paying \$1 a share in dividends. In addition Squibb Plan receives a sum from the parent company equal to 10 per cent of the amount of the retailer's purchase of Squibb products and an additional 10 per cent on the increase of his purchases over the previous year's.

If the retailer's purchases come to \$600 in the next year, Squibb Plan gets 10 per cent (\$60), and another 10 per cent (\$10) on the increase in the retailer's purchases. So all told Squibb Plan gets \$80. Out of this it pays the retailer 5 per cent (\$30) on his money. Of the remaining profit (\$50) half goes back to the parent company and the rest (\$25) is prorated among the retailers in proportion to the amount of their direct purchases from Squibb. If

no more dividends are paid the retailer would still get his 6 per cent and probably something besides from Squibb Plan. But either increase in dividends or increase in his Squibb purchases will add to the retailer's profit.

As an extra inducement to go into the plan, Squibb is offering to every retailer whose purchases average more than \$100 a month for the 15 months ending December 31, 1930, the opportunity to buy directly, at \$50 a share, as many shares of Squibb common as he holds of Squibb Plan. *Time*, August 26, 1929, p. 47:2.

### Ten Things to Consider in Picking a Store Location

"It does not look like a jinx location."

Before you purchase or sign a lease on a store location be sure you have the answers to these ten queries regarding it: 1. What sort of a trading area has it? 2. Is it on the right side of the street? 3. Is it favorably located as concerns car stops? 4. How many pass by? 5. Are those who pass possible purchasers or are they merely hurrying to get elsewhere? 6. Do the surroundings attract buyers? 7. Is there sufficient protection from wind, sun, rain, and snow? 8. Is the building properly constructed for the business to be conducted in it? 9. Is it in good repair? 10. What about competition in the locality? By G. B. Stevenson. *System*, September, 1929, p. 25:3.

## Salesmen: Selection, Training, Compensation

### Automatic Promotion System

The junior employees of N. Snellenberg & Co. are now trained through a system of automatic promotion, which is proving very satisfactory. The system is based upon the assumption that their work should be utilized as a preparatory school of training, graduating a sufficient number each year to satisfy the ordinary replacement requirements. In addition to the automatic fea-

ture of promotion, the messengers are given courses as inspectors during their period of serving. Likewise, the course in the position just ahead is open to each junior until the course in selling is reached, and then promotion depends upon the ability of the individual. There is a great deal of interest among the cashiers in the selling courses. *Retailing*, August 10, 1929, p. 23:1.

### How We Regulate Employee Purchases

The Hartman Corporation has recently made a ruling which permits selling to employees on time payments at the same discounts which they are given for cash payments. Certain restrictions and modifications were found to be necessary, however, one of them being that a purchaser must have been in the employment of the company for sixty days or longer. This is because many sales people will come to work for a short period merely to secure an employee's discount. The minimum down payment required on a deferred payment account is twenty-five per cent. This is for the protection of the company, and is also one of the ways in which the employee's buying is limited in order to keep his expenses within his resources. A further restriction is that no employee is allowed to owe at any one time upon a deferred payment buying account, more than one-fifth of his annual salary. The general average of employee accounts compares most favorably with the average of customer accounts. By Edward G. Felsenthal. *Chain Store Age*, August, 1929, p. 37:2.

### Picking Salesmen for Jobs Higher Up

In order to dissipate the idea in the mind of the salesmen of the Creo-Dipt Company that selling is a blind-alley job, the Sales Council has been formed. Its personnel will consist of the most valuable man from each of the five major divisions in the selling organization as well as one sales executive from the general offices, chosen once every six months. The Sales Council will hold two meetings, not more than two days in length, during each six-month period. The mere appointment of a salesman to the Sales Council carries with it an initial award of \$100. In addition, each salesman who is a member of the Council will receive a fee of \$100 for each of the two sessions he must attend, as well as traveling and living expenses

during the two-day meeting. The appointee in any division must combine superior salesmanship and general business ability.

The Merchandising Committee which makes the appointments to the Sales Council consists of the sales managers of each of the five districts of the United States, the sales manager of the Creo-Dipt Company of Canada, Ltd., the advertising counsel, and the vice-president acting as chairman of the committee. By J. D. Giles. *Printers' Ink Monthly*, September, 1929, p. 29:3.

### The Experience of 162 Concerns in Setting Sales Tasks

It is the experience of these and other concerns that a successful sales quota must fit the salesman in the territory, just as much as the business in the territory. If that is not done, either the man will become discouraged or he will resort to forced draft methods. Most of the concerns, however, agree that there must be a definite sales target set up. Opinions differ as to whether this target should be an inflexible figure based on the quota of potential business existing, or whether it should be merely a sales task set from time to time, which may be changed as circumstances dictate. A greater number favor the sales task as compared to the sales quota. *Report No. 300*. The Dartnell Corporation. 28 pages.

### Calls Good Taste Business Essential

According to Walter Hoving, executive vice-president of R. H. Macy and Company, good taste is essential to success in retail business and is a common deficiency in the college graduates who seek executive merchandising positions. It is not difficult to acquire good taste under the proper guidance and if the colleges do not accept this obligation, the stores themselves will have to give the necessary instructions. It is just as important for a store to guard its customers against bad taste



as it used to be to guard them against bad quality, because eventually the purchaser of a poorly designed article will find it out. A bad piece of merchandise can create greater ill-will than the most discourteous employee. To secure selection of goods in good taste, a store's buyers must be experts in design and good taste. *The New York Times*, September 5, 1929, p. 48.

### How a Salesman May Use a Factory Man

There are many good factory men who have genuine sales instincts. The ability to make men like his ideas is an important part of a salesman's job. Several instances are given of difficult sales being made by shop superintendents. "A man from the factory" carries weight. He possesses inside knowledge, and for this reason his comments have additional importance. And there is another side to this. Those foremen who go out for a week or two to help in closing sales invariably make better foremen on their return. They develop a merchandising sense which stands them in good stead in putting their work through the shop. So using shop men now and then to help make sales is not only good business from a selling standpoint, but it generally proves beneficial from a manufacturing standpoint. By A. H. Deute. *Printers' Ink*, September 5, 1929, p. 57:4.

### This Plan Cut the Cost of Hiring Salesmen from \$40 to \$7

The J. B. Ranson Corporation, a large realty firm, is one of the concerns in which ballyhoo methods of sales promotion have given way to sound principles of merchandising. The simple plan is premised on these two facts: 1. The satisfied and contented customer is the most permanent asset of a business. 2. The satisfied customer is one who buys because he is given all the facts that point

to the advantage of buying. That is, he is approached by logic rather than by emotion.

Turnover of salesmen has not been altogether eliminated, but the number of new salespeople has been reduced from three hundred a week to about twenty-five. It formerly cost about forty dollars in advertising to secure a new salesman; now, only seven dollars. Training the men costs about \$25 each, including advertising and overhead of training quarters. Above all, the new recruits are taught not to "high-pressure". Negative salesmanship which allows the prospect to sell himself is not discouragement. And the method sells real estate. By Mandus E. Bridston. *Sales Management*, August 31, 1929, p. 389:2.

### Dennison's Courtesy Plan for Receiving Salesmen

A small booklet which salesmen find in the reception room of the Dennison Manufacturing Company explains the procedure to be followed in getting an interview and the courtesy which the company extends to its callers. The visit, from opening the reception room door to catching a train, is outlined. Time tables for local trains and a large road map for motorists, are also to be found in the reception room. These courtesies are especially interesting in the light of the increasing interest among all sales executives of finding ways and means for cutting down the enormous waste which is involved in the time salesmen must spend waiting for buyers. *Sales Management*, August 10, 1929, p. 265:1.

### The Difference Between Good and Poor Salespeople

According to the Director of Medical Research of R. H. Macy & Co., Inc., qualifications of the best types of retail salespeople are:

Age—Men, 22 years or over. Women, 18 years or over.



Schooling—Men, P.S. graduate. Women, one—two years H. S. preferable.

Work Experience—Not necessary in most departments; exceptions are such departments as Clothing, Sporting Goods, Oriental Rugs, Shoes, Diamond Jewelry.

Physical Condition—Freedom of movement of arms and legs, freedom from flat feet, good eyesight and hearing; good, vigorous general health. Height—Women, 5 feet 5 inches. Men, 5 feet 8 inches. Normal blood pressure.

Special Abilities—Legibility, fair or good. Arithmetic, fair or good.

Personality, General—Alert, active, stable, well integrated, good attitude.

Special—Likes contacts with people, interested in selling, aggressive, convincing, extrovert or ambivert, pleasant and agreeable contacts, good appearance, able to inspire confidence, poise, able to talk well, adaptable to different personalities, responsiveness.

Intelligence—I. Q., 80-110. By V. V. Anderson. *Retail Ledger*, Second August issue, 1929.

#### Perpetual Inventory of Abilities of Salespeople

The Superintendent of Livingston Bros. tells how a card index obviates some of the difficulties incident to temporary help. By H. W. Callahan. *Retail Ledger*, First September issue, 1929.

### Salesmanship

#### The Curtiss Plan for Handling the Airplane Service Problem

In spite of its rapid growth the aviation industry is not ready for the dealer or salesman who is not first of all a pilot. Its greatest problem today is overcoming the prejudice many people still feel toward flying. To overcome this fear and to inspire confidence aviation equipment should be sold and educational work done only

by men who are pilots, because of the danger of overselling. In other fields, overselling through an exaggerated impression of what the product will do, may mean only a dissatisfied customer, but in the aviation industry it may mean a loss of life, and an unfavorable reaction on the entire industry. It is too early to predict as yet whether the professional dealers or salesmen may later become important factors in airplane selling as in the automotive and other fields. As told to Lawrence M. Hughes by G. Sumner Ireland. *Sales Management*, August 10, 1929, p. 241:2.

#### The Three Hellish Gifts of Salesmanship

A London advertisement consultant believes that "the three divine gifts of salesmanship" mentioned in a previous article,—the power of forceful speech, the power of amplification, and nerve—are entirely unsuited to English selling methods. Over there a chatty salesman is turned down, be he attractive or otherwise, because while he is talking the buyer will not be able to tell him what lines he wants. English salesmen are taught that all they have to sell is service, an idea particularly stressed by our Claude Hopkins, but apparently forgotten by some American sales managers. By P. Garfield Blake. *Printers' Ink*, August 29, 1929, p. 49:2.

#### Is Selling Intellectual or Emotional?

Both methods are effective, depending on the nature of the prospect. However, most prospects are more emotional than they are intellectual, and consequently the emotional salesman is more often effective than the intellectual type. The trained buyer is, insofar as his work is concerned, a confirmed intellectualist. He is concerned with goods as goods only. The wholesaler views things in much the same way. But how different is the attitude of the person who buys things for use and

enjoyment! The intellectual salesman might possibly satisfy a woman that one dress, for instance, is better than another, by the processes of logic and demonstration, but that would not satisfy her, and satisfaction is what the customer wants. Proof is not salesmanship. It is the art

of pointing the contrast between a condition of unconscious discontent owing to the lack of something in the past and a condition of emotional enjoyment owing to the possession of something in the future. By Philip E. Spane. *Marketing*, September 14, 1929, p. 141:3.

### Books Received

**Wall Street Bootleggers.** By John W. Burchinal. The Author, Steubenville, Ohio, 1928. 143 pages.

**The Useful Art of Economics.** By George Soule. Macmillan, New York, 1929. 250 pages. \$2.00.

## Survey of Books for Executives

**Commodity Exchanges.** By Julius B. Baer and George P. Woodruff. Harper & Bros., New York, 1929. 319 pages \$5.00.

The authors in this work have given a comprehensive description of commodity exchanges for the layman. The style is simple and technicalities have been avoided; as a consequence the book is very readable. While other books have been written on certain individual commodity exchanges, or particular aspects of these exchanges, this is probably the first general work on the subject. Historical material is limited to the essentials for a correct appreciation of the subject matter. The book is fair-minded and well balanced where controversial questions are at issue.

The introduction to the subject is made through an explanation of Future Contracts, an understanding of which is essential in any discussion of the problem. There follow in turn descriptions of the Government and Operation of Exchanges, the Clearing House, Hedging, Speculation, Crops and Market Prices, Grading, Standardization, Inspection, Government Regulation, Commodities Adaptable to Future Trading, The Economic Functions of Commodity Exchanges, and lastly the Legal Problems of Commodity Exchanges.

Far the greatest amount of space in the text is given to the subject of speculation. In fact if any single criticism could be made of the book it would be of the space which has been devoted to the theoretical discussion of this subject, though the authors might well rejoin that an understanding of speculation in commodities is fundamental to an understanding of commodity exchanges. The latter contention must be granted, but this subject has been covered so frequently that one wonders whether this aspect of the problem might not have been offered in somewhat more condensed form and more attention given to other features of the different types of exchanges.

While the discussions on future trading, hedging, and speculation offer nothing new on the subject, they are all excellent summaries. The authors are also to be commended very highly for the meticulous care with which they have quoted authorities for certain of their statements. In these days too many books which are mere re-statements of previous works are being written on commercial and business subjects; yet acknowledgments are seldom given. One might be patient with such books if they were well written and organized—but alas, more often they are not.

The discussion on speculation and prices has been devoted to the relatively long-time

point of view, and rightly so, but it would be interesting to know what the authors' more detailed opinion of the causes of certain types of short term price movements are. While exchanges have now so largely eradicated wilful manipulation that one can count the successful large corners, for example in wheat, for the past fifty years, on the fingers of one hand, there have been many successful short operations carried on by the shrewd market operator familiar with the world markets in this commodity. Though the control of these prices which is usually attributed to commodity exchanges does not exist, many temporary run-ups in prices have occurred—and often these have collapsed because of the inopportune buying or selling of an ill-informed public. Since accurate information on this phase of commodity markets is extremely meager, it would seem that if a sufficient number of cases could be secured and a frank and complete statement of these cases made much would be accomplished toward clarifying the atmosphere of the misunderstandings, or lack of knowledge, of the limited effect of any effort to control artificially the long time movements of commodity prices.

The authors state (p. 210) that "the commodity exchanges are not a direct link in the distributive system." The brief but excellent summary on the Economic Functions of Commodity Exchanges by the authors themselves would seem to deny this statement. The fact, as they maintain, that commodity exchanges are vital to securing fairer and more stabilized prices is in itself, apart from other arguments which might be taken from the context of the book, sufficient evidence of its fundamental place in modern distribution.

The discussions on organization, operations, the clearing house, the character of a typical transaction, and the various technical features of commodity markets such as grading, reports, etc., are concise and well done from a descriptive standpoint, but one wishes the authors had also given us the benefit of their critical analyses of

some of these problems. Such suggestions in this direction as are offered are rather incomplete. Likewise the ever increasing importance and demand for government regulation would seem to necessitate a more complete and critical treatment of the subject than is given. With so many problems which a book of this comprehensive type must cover, limitations, of course, must be placed somewhere.

The last three chapters on the law of the exchanges appeals to the reviewer as the most satisfactory summary in the whole book. A concise and clear discussion is made both of the law and of judicial decisions.

For those who are not familiar with their organization and operations and with how commodity exchanges function with and contribute to the commodity markets, this book should prove useful. We should commend it to these readers. It should also be interesting to those who are more or less familiar with one type of commodity exchange but desire to secure a more complete picture of commodity exchanges in general.

WALTER E. LAGERQUIST,  
*Counsellor on Investments,  
Irving Trust Company.*

**Rayon and Other Synthetic Fibers.** By W. D. Darby. Dry Goods Economist, New York, 1929. 65 pages. \$1.50.

Recent improvements in the quality of the rayon fiber and the fabrics made from it are responsible in a large measure for the favorably changing consumer attitude toward rayon. Exceptional progress has been made in the application of rayon to different uses, the introduction of low-luster, fine multi-filament yarns and the increasing of the tensile strength of rayon (particularly in the wet state). This progress has been so rapid that many merchants and salespeople do not possess the proper information concerning these improvements although they are well informed in regard to the older natural

products: cotton, linen, wool and silk. Teachers of textiles in department stores and in schools will find this handbook a material aid in presenting merchandise information about rayon.

The author covers the origin and development of the rayon industry; a forecast of the probable progress of rayon; the field of rayon uses; the processes by which the different kinds of rayon are made; the characteristics of the different kinds of rayon and of rayon fabrics; and methods of educating the consumer in the cleaning or laundering of rayon.

ISABEL B. WINGATE, *Co-ordinator,  
School of Retailing,  
New York University.*

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**Scientific Sales Management Today.** By Charles W. Hoyt. Ronald Press, New York, 1929. 253 pages. \$4.00.

Against a background of almost forty years of rich personal experience as a Traveling Salesman, Sales Manager, Advertising Manager, Superintendent of Branch Houses and President of his own Advertising Agency,—an experience from which he freely draws for purposes of illustration and emphasis—Mr. Hoyt wrote this book, which is at once an exposition of scientific principles as applied to Sales Management and a book full of practical sales methods for the guidance and help of Sales Managers who are striving to apply scientific principles in their work.

I sometimes think that for unity, cumulative power and practical residuum, some of the sales manuals prepared for the education of their salesmen by Insurance, Household Appliance, Investment and other direct selling concerns are unequalled in the whole field of sales writing. To read them is a mental march. From the beginning you know in which direction you are going and when, by orderly steps, you finally arrive you also know "how" you got there and have acquired a clear mental picture of the whole process.

One reading "Scientific Sales Manage-

ment Today" experiences the same feeling of unity, progress and clarity. After a very brief comparison of past and present sales management and an estimate of what opportunity the future holds for the real sales manager, the author immediately gives the approach to scientific management, states the four principles as summarized by Mr. Taylor and proceeds to apply them to marketing.

The successive discussion and illustration of the practical application of these principles to such operations as "Laying the Foundations of a Modern Sales Department," "The Selection of Salesmen," "Developing the Salesman," "Providing the Salesman's Kit," "Value and Use of the Sales Manual," "Direct-by-Mail Co-operation," "Measuring Your Market as a Guide for Quotas," "Compensation," "Conventions and Conferences," "Making the Department Carry Its Burden," etc., is a continuity that has two results of great practical value. At the end we see all these present-day operations as the more or less perfected and co-ordinated parts of the burden assumed by scientific sales management today as its share in the battle to reduce the "percentage of cost to sell." In addition, in his discussion of the various topics, Mr. Hoyt has created a manual for sales managers so full of practical sales methods, sound sales theory and helpfulness, that it will, as Mr. Barton says in his introduction, perpetuate his personality and sound judgment for many years in the lives and work of other men.

TOM JONES MEEK,  
*Marshall-Wells Company.*

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**The Co-operative Pattern in Cotton.** By Robert Hargrove Montgomery. Macmillan Company, New York, 1929. 335 pages. \$2.50.

The experiences of the Texas Farm Bureau Cotton Association, the largest of the cotton co-operatives, are reviewed with a vitality of style and a vividness of detail which make this volume thoroughly in-

teresting as well as instructive reading. The *laissez faire* system in agriculture in general is exposed in all its weakness, although the discussion is specifically confined to the cotton growing industry in the South. The solution favored by Professor Montgomery is indicated by the heading of the first chapter, The Case Against the Traditional System, and forcefully summarized in the final chapter, The Case for Co-operation.

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**Intensive Sales Management.** By J. C. Aspley. Dartnell Corporation, Chicago, 1929. 273 pages.

This book is a revision and combination of two loose-leaf surveys undertaken by the writer several years ago on "Sales Management Practices" and "Modern Sales Organization." It discusses the plans and practices actually in use in various companies and in many cases includes tabulations of results of inquiries on sales management policies. Some of the chapter headings are: The Systematic Selection of Salesmen, Better Methods of Compensating Salesmen, Sales Manuals and the Standardized Canvass, Arranging Territories and Setting Sales Tasks, Branch Office Organization and Control, Work Organization in the Sales Department.

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**Accounting by Machine Methods.** By H. G. Schnackel and Henry C. Lang. Ronald Press, New York, 1929. 563 pages. \$7.50.

"Accounting by Machine Methods" is a very valuable text book, complete and comprehensive, and directs the way to modern methods of accounting.

The authors have evidenced, through their efforts, exhaustive research work and have presented every phase of accounting, which includes design and operation of modern systems through machine methods.

This book appeals in a practical way not alone to those who are contemplating the change over from pen to machine methods,

but also is instructive as well as suggestive to those who are at present developing machine methods in accounting. It seems to have been the authors' purpose carefully to trace every office function so that the suggestions and methods would assist in the proper application of mechanical accounting devices and also serve as a guide in deciding upon mechanical installations. Nothing has been spared to describe very completely all types of accounting machines and to contrast and bring out the characteristics of each according to the work the piece of equipment is intended to perform.

After reviewing this book, the references might be divided into three important groups.

First, an analysis of the accounting jobs by departments, which broadens out into types of organizations, flow of work and the fundamental accounting operations necessary. This ground work is carefully developed and built up step by step and forms the basis for doing the job efficiently and also for determining the necessary mechanical equipment.

Second, classification of the work to be accomplished, planning the layout, necessary forms which are suggestive of the results to be obtained and applicable to machine methods of accounting. This is supplemented by illustrations of accepted standards in forms and printing arrangement covering the accounting control of administration and factory departments.

Third, complete description of all types of mechanical accounting devices, their characteristics and how each can best be used and adapted to your business.

This is truly a reference book, as well as a text book, and is a fund of valuable information even to the man responsible for office management and accounting, who feels that he is abreast of the times as far as modern mechanical equipment is concerned.

ARTHUR BATTS, *Secretary,*  
*The Carborundum Company.*



**Manufacturing.** By Malcolm Keir. Ronald Press, New York, 1928. 611 pages. \$5.00.

"Manufacturing" is the first of a series of books on industries of America which will be written by various authors and all edited by Mr. Keir. It is a chronological development of the leading manufacturing industries of today and of the economic forces which have acted to bring them to their present position. There are twenty-four chapters. Some of the chapter headings are listed below:

Power

The development of the factory system

The peddler—his services to early manufacturing

Iron

Steel

The automotive industry

Silk

Glass

American labor

Labors' industrial problems and others.

The work is free from technical terms but is written with an understanding of the technology of the industries covered as well as their historical and social background and gives a comprehensive picture in readable terms of American manufacturing development.

**Objectives and Problems of Vocational Education.** Edited by Edwin A. Lee. McGraw-Hill Book Co., New York, 1928, 451 pages. \$3.00.

In this book Professor Edwin A. Lee has edited a symposium, covering the history, development, and trends in vocational education and contributed to by some seventeen leaders in various fields into which the general movement has naturally divided. While on the whole the book seems to be written for, and is consequently of greatest interest to, those actively engaged in some phase of the work fostered by the Smith-Hughes Act for Vocational Educa-

tion, such chapters as those on Trends of Commercial Education, Trends in Part-Time Education, Trade and Industrial Education, Vocational Rehabilitation of the Disabled, Industrial Arts Education, the Employer's Attitude toward Vocational Education, and the Worker's Attitude toward Vocational Education cannot fail to attract attention from alert executives who are interested in the movement to conduct education in the upper secondary grades in co-operation with wage-earning occupations.

**A Scientific Approach to Investment Management.** By Dwight C. Rose. Harper & Bros., New York, 1928. 440 pages. \$5.00.

The author dedicates his book to "the increasing army of American investors" and the first four chapters arouse hopes that he is really going to say something to the members of this army. The next two chapters, however, dealing with fire insurance company investment experience and with the long-time trend of security values as revealed by the Dow-Jones averages, read like a doctor's thesis, and one fears that the average individual investor may give up in despair at this point. It would be unfortunate if he did, for the later chapters proceed with a very sound and lucid exposition of the investment problem. Assuming that the typical investor of moderate means follows the author to the end, it seems likely that he will come to the conclusion that he must either put himself in the hands of a competent investment counsellor or invest his funds in the stock of reputable and well-managed investment trusts. Certainly it should be clear to him that he can scarcely hope to acquire the background of knowledge necessary for planning and carrying out a scientific investment program.

One is inclined to believe that the author underestimates the degree of responsibility assumed by the large and reputable investment banking house. The continuing success of such a business depends on a

large and continually increasing clientele of satisfied investors. Investment banking houses maintain large statistical departments for various types of research, and the successful securities salesman of the present is an assiduous student of investment problems. The writer has talked with a number of such men who have read the volume under review with a great deal of interest, and have found it very suggestive. It is to men like these, to financial executives responsible for the investment of company funds, to trust officers responsible for estates and other funds, and to others who are continually engaged with investment problems, and who already have a background of experience in such problems, that this book should make the strongest appeal. Such men will find the very considerable array of charts and tables assembled in the appendices particularly interesting.

It would certainly be desirable that this book should be read by a large number of the investors to whom it is dedicated. A careful reading by an intelligent member of this group could not fail to convince him of his inadequate preparation for dealing unassisted with his investment problems, and would result in the employment of competent counsel.

A. C. HODGE,

*A. G. Becker & Co.*

**Born That Way.** By Johnson O'Connor. Williams & Wilkins, Baltimore, 1928. 323 pages. \$6.00.

Mr. O'Connor's work at the General Electric Company in West Lynn has been increasingly known through his shorter writings which have received wide and favorable attention. It was, therefore, not unreasonable to expect that in his book he would amplify on his past experience in the discovery and use of employment tests and would supply a working manual of considerable helpfulness. He has, however, seen fit to relegate his test discussion in detail to the appendix, where the valuable results he has obtained are given in some

fullness. But the text itself has become a somewhat more general discussion in which matters of fact have been subordinated to discussions of more general matters of opinion. This part of the material is far less valuable for its concrete suggestions than one might have hoped, although the volume as a whole is a distinct addition to the literature of special tests in business and deserves a place in all personnel department libraries.

ORDWAY TEAD,

*Director of Business Books,  
Harper & Brothers.*

**Music in Industry.** By Kenneth S. Clark. National Bureau for the Advancement of Music, New York, 1929. 383 pages. \$3.00.

This rather large volume is the result of two years' painstaking research as to actual conditions in the use of music in industry. The book cannot be called breezy for it contains much statistical matter. The results of the research have been well arranged to present a logical recommendation for the continuance of such music as now exists in industry, expansion of present activities, and new installations. We believe the author had no ulterior motive in the publication. We read it with considerable pleasure and believe it deserves a place in industrial libraries both for executives and workmen.

Music in industry is considered "as oil to the machine" and this is quite well expressed. No attempt is made to measure exactly the influence of music, yet the result of research in 625 industries shows 911 musical activities in actual operation with 14,650 participants and with gratifying results.

The publication is a work of art, good paper, good English, good illustrations, and keen logic. It is the first exhaustive work in this line and while the story is rather lengthy, we do not see how it could be abridged and still cover the field. The patience and perseverance of the author

deserve every possible consideration, and all that is asked is that it be read thoughtfully. Executives and supervisors will do well to take time to do this. In a great many cases music is introduced into industry, ordinary expenses are paid, and the executive feels that he has done a good day's work and can take a rest. As in any other activity, the failure of the executive to have a personal interest is deadening. It speaks well for music that it has survived this deadening influence and this fact is one of the best recommendations for the activity.

We hope those who are fortunate enough to receive a copy of this publication will not let the statistics interfere with a thoughtful reading, and while music is but one of the many activities industry has considered, we must not overlook the fact that music is the one universal language of the human race.

G. L. APPEL, *Employment Manager,*  
*The White Motor Company.*

**Frontiers of Trade.** By Julius Klein.  
Century Co., New York, 1929. 328  
pages. \$2.50.

With the United States each day becoming more keenly interested in foreign trade, with a period rapidly approaching when almost every manufacturer in the country will doubtless turn his eyes abroad for additional fields to conquer, the appearance of Julius Klein's "Frontiers of Trade" is exceedingly opportune. Visit the office of any United States Commercial Attaché in a foreign country, mention the name of Julius Klein and the unanimous opinion enthusiastically expressed is that "there is the man who knows foreign trade and knows it thoroughly!" A book from his hand at this moment on the subject he knows so well consequently assumes an importance of the first order.

To the lay reader it presents an interesting picture of what our foreign trade is, what it does—its growth, its obstacles, its outlook for the future. The economic interdependence of nations is made clear.

The resident of Cleveland, Ohio, can see how closely intertwined is his welfare with that of the resident of Calcutta, India. The effect of the economic situation on history and on present-day international politics becomes apparent. One gains for the first time a complete conception of what a tremendous influence the necessities and luxuries of life have upon the peace and progress of this intricate civilization of ours.

It is to the business man, however, that the book will have its greatest appeal and fulfill its greatest usefulness; for it presents a graphic, dependable picture of the great world markets of today. It shows the progress made by each of the important trading nations during recent years, the economic recovery of the belligerent countries since the war and the strides each one is making toward developing markets overseas.

Mr. Klein illustrates his various points with interesting experiences and anecdotes culled from actual experiences abroad or through administrative duties at home. He punctuates his account with statistical information that cannot fail to impress. He gives valuable information on trade-mark and patent difficulties encountered abroad which cannot fail to be of help to everyone engaged in foreign trade.

Most important of all, however, is the vista he opens for our own expansion in fields overseas and the tribute he pays to the enterprise which is placing us in the foremost ranks of international traders. "The greatest monument to American industrial and commercial achievement," he says, "is the enormous junk heap of abandoned practices, methods and ideals, all of which were once 'normal,' but which today are the most useless relics of antiquity."

From its foreword by Herbert Hoover, through every page of its highly informative contents, it is a book which will be of supreme interest to every foreign trader, actual or potential.

F. C. HITCH, *Vice-President,*  
*Royal Baking Powder Company.*